

Application No.: 10/566,327
Amendment Dated: November 12, 2010
Reply to Office Action of: July 15, 2010

MAT-8808US

Remarks/Arguments:

Claims 1-2, 4-5 and 9 are pending and rejected in the application. Claims 1 and 9 have been amended. No new matter has been added.

On page 2, the Official Action rejects claims 1-2, 4-5 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Nakamura (US 2002/0021264) in view of Kim et al. (US 7,109,951), in view of Homma US 2001/0020923) and further in view of Hirakawa (US 6,140,775). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

... in the abnormal charge erasing part which is provided after the latter half part and before the writing period, applying a positive rectangular waveform voltage to the scan electrodes for a predetermined period of time and then applying a negative rectangular waveform voltage for a shorter period than the predetermined period of time ...

Claim 1 relates to an abnormal charge erasing period. Specifically, the abnormal charge erasing period is positioned between a latter half part of the initialization period and the writing period. During the abnormal charge erasing part, a positive rectangular waveform having a wide pulse width is applied to the scan electrodes followed by a negative rectangular waveform having a narrow pulse width. Support for this feature is at least shown in Applicants' Fig. 4 and described on page 10 of Applicants' specification. No new matter has been added.

As shown in Fig. 9, Nakamura's initializing period includes a positive ascending ramp waveform and a positive (not negative) descending waveform. Nakamura's writing discharge period also, does not include a bipolar rectangular waveform.

In similar art, Kim's initializing period includes a rectangular waveform. Kim's rectangular waveform, however, is not bipolar. Also, Kim's rectangular waveform does

not have a positive rectangular waveform having a wider pulse width and a negative rectangular waveform.

In similar art, Homma's initializing period includes a positive ascending ramp waveform and a negative descending ramp waveform. Homma's initializing period, however, does not include a bi-polar rectangular waveform. Furthermore, the positive ascending ramp waveform in Homma does not have a wider pulse width than the pulse width of the negative descending ramp waveform.

On page 5 of the Official Action, the Examiner cites columns 14 and Fig. 5 of Hirakawa. Specifically, Fig. 5 of Hirakawa shows a positive rectangular waveform voltage P_{eb} followed by a negative rectangular waveform voltage P_{sen2} . Thus, Hirakawa suggests a bi-polar rectangular waveform. However, the bi-polar rectangular waveform as shown in Fig. 5 of Hirakawa is applied to the sustaining electrodes during the sustaining charge erasing period (not to the scan electrodes during the initialization period as recited in Applicants' claim 1). Thus, Applicants respectfully disagree with the Examiner. Specifically, combining Hirakawa with Nakamura, Kim and Homma would result in a bi-polar rectangular waveform being applied to the sustain electrode during the sustaining period (not to the scan electrode during the initializing period).

Applicants' claim 1 is different than the art of record, because during the abnormal charge erasing period (which is between the latter part of the initialization period and the writing period) a positive rectangular waveform is applied to the scan electrodes having a wide pulse width followed by a negative rectangular waveform applied to the scan electrodes having a narrow pulse width ("*... in an abnormal charge erasing part which is provided after the latter half part and before the writing period, applying a positive rectangular waveform voltage to the scan electrodes for a predetermined period of time and then applying a negative rectangular waveform voltage for a shorter period than the predetermined period of time ...*").

As shown in Applicants' Fig. 4, the abnormal charge erasing part is located at the end of the initializing period. Specifically, the abnormal charge erasing part is located between the latter part of the initializing period and the writing period. During the abnormal charge erasing part of the initializing period, a positive rectangular

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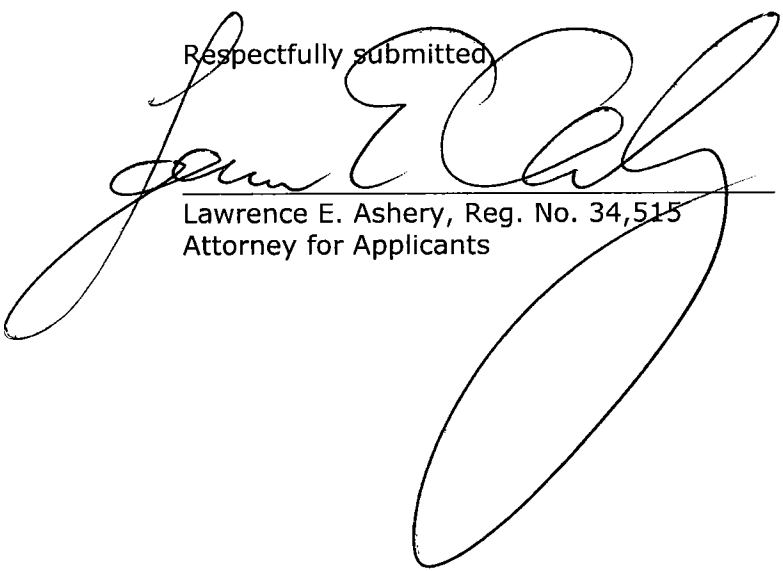
waveform having voltage V_m followed by negative rectangular waveform having voltage V_a are applied to the scan electrodes. More specifically, the positive rectangular waveform has a wider pulse width than a negative rectangular waveform. This feature is at least described on page 10 of Applicants' specification ("*... To the scan electrodes ... after positive voltage V_m (V) smaller than a discharge starting voltage is applied for 5 to 20 μ s, negative voltage V_a (V) is applied for a short period up to 3 μ s. During these periods, no discharge occurs in the discharge cells ...*"). Accordingly, for at least the reasons set forth above, claim 1 is patentable over the art of record.

Dependent claims 2, 4-5 and 9 include all of the features of claim 1 from which they depend. Thus, dependent claims 2, 4-5 and 9 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

Claim 9 has been amended to correct a minor informality. No new matter has been added.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,


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